

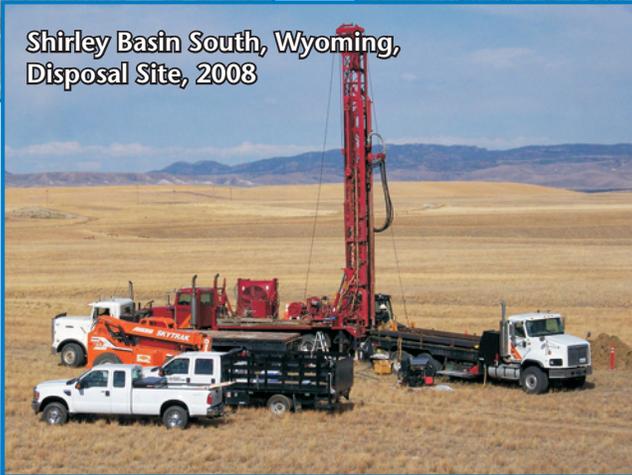
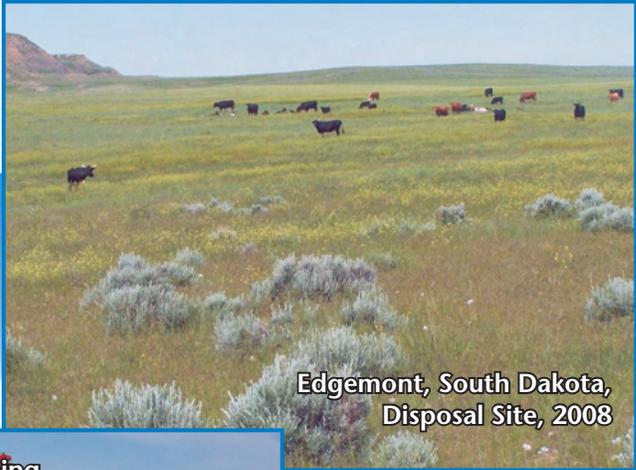


U.S. DEPARTMENT OF
ENERGY

Office of
Legacy Management

2008 Annual Site Inspection and Monitoring Report for Uranium Mill Tailings Radiation Control Act Title II Disposal Sites

November 2008



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Office of Legacy Management**

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Acronyms

AAS	alternate abatement standard
ACL	alternate concentration limit
BIA	U.S. Bureau of Indian Affairs
BLM	U.S. Bureau of Land Management
CFR	<i>Code of Federal Regulations</i>
DOE	U.S. Department of Energy
EMP	erosion monitoring program
LM	Office of Legacy Management
LTSP	Long-Term Surveillance Plan
mg/L	milligram(s) per liter
NRC	U.S. Nuclear Regulatory Commission
PCB	polychlorinated biphenyl(s)
pCi/L	picocurie(s) per liter
PL	photo location
PMF	probable maximum flood
POC	point of compliance
POE	point of exposure
TDS	total dissolved solids
UMTRCA	Uranium Mill Tailings Radiation Control Act of 1978 (88 USC 7901, et seq.)
WDEQ	Wyoming Department of Environmental Quality

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Executive Summary

This report, in fulfillment of a license requirement, presents the results of long-term surveillance and maintenance activities conducted by the U.S. Department of Energy Office of Legacy Management (DOE-LM) in 2008 at five uranium mill tailings disposal sites reclaimed under Title II of the Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978. These activities verified that the UMTRCA Title II disposal sites remain in compliance with license requirements.

DOE manages five UMTRCA Title II disposal sites under a general license granted by the U.S. Nuclear Regulatory Commission (NRC) established at Title 10 *Code of Federal Regulations* Part 40.28. Reclamation and site transition activities continue at other sites, and DOE ultimately expects to manage approximately 27 Title II disposal sites.

Long-term surveillance and maintenance activities and services for these disposal sites include inspecting and maintaining the sites; monitoring environmental media and institutional controls; conducting any necessary corrective action; and performing administrative, records, stakeholder services, and other regulatory functions.

Annual site inspections and monitoring are conducted in accordance with site-specific long-term surveillance plans (LTSPs) and procedures established by DOE to comply with license requirements. Each site inspection is performed to verify the integrity of visible features at the site; to identify changes or new conditions that may affect the long-term performance of the site; and to determine the need, if any, for maintenance, follow-up or contingency inspections, or corrective action. LTSPs and site compliance reports are available on the Internet at www.lm.doe.gov.

The sites required routine monitoring and maintenance activities in 2008, including groundwater monitoring, erosion and vegetation monitoring, vegetation and noxious weed control, and access road and fence repairs. The following non-routine activities¹ occurred in 2008.

- L-Bar, New Mexico—Additional sections of barbed-wire fence were installed to improve grazing controls and to enclose an area with excessive gully erosion.
- L-Bar, New Mexico—Land and aerial surveys were conducted for erosion control design purposes; erosion control construction is planned for 2009.
- Shirley Basin South, Wyoming—The groundwater alternate concentration limit for radium-228 continues to be exceeded at two monitor wells. Six new monitor wells were installed in fall 2008 to provide additional data for evaluating the two aquifers of concern. The LTSP will be revised to incorporate the expanded monitoring network and recommended monitoring requirements and will be submitted to NRC in 2009 for concurrence.

¹Nonroutine activities are activities implemented in response to changes in site conditions, regulatory setting, or management structure following an extraordinary event or regulatory compliance review.

Results of the annual site inspection, maintenance, and monitoring activities are reported in the site-specific chapters that follow. Significant actions and issues at each site are summarized in Table ES-1, which includes an index number for each item that can be found in the left margin next to the corresponding text in the respective site chapter.

Table ES-1. 2008 Summary of UMTRCA Title II Site Issues and Actions

Site	Chapter	Page	Index No.	Issues and Actions
Bluewater, New Mexico	1	1-2	1A	Replaced damaged monitor well cover.
		1-5	1B	Surveyed an area of shallow depressions on the disposal cell cover.
		1-6	1C	Investigated a portion of the site being considered for solar power development.
		1-6	1D	Repaired damaged fence locations.
		1-7	1E	Groundwater compliance monitoring.
		1-8	1F	Wells sampled by the state of New Mexico.
Edgemont, South Dakota	2	2-2	2A	Replaced the damaged entrance signpost.
		2-5	2B	Sprayed noxious weeds.
L-Bar, New Mexico	3	3-2	3A	Installed new sections of barbed-wire fence.
		3-2	3B	Installed perimeter signs on new sections of fence.
		3-5	3C	Installed a wooden stile to safely cross the fence.
		3-6	3D	Installed caution signs identifying water hazards.
		3-6	3E	Erosion repairs planned for the basin discharging into the sediment trap.
		3-6	3F	Erosion repairs planned for the east slope of the East Channel.
		3-6	3G	Erosion repairs planned for the north slope of the North Channel.
		3-7	3H	Sprayed tamarisk with herbicide.
		3-8	3I	Groundwater compliance monitoring.
		3-9	3J	Reduced frequency of groundwater monitoring according to LTSP.
3-9	3K	Measured cell cover erosion and vegetation.		
Sherwood, Washington	4	4-6	4A	Conducted dam safety inspection.
		4-7	4B	Sprayed noxious weeds.
		4-7	4C	Measured weed populations.
		4-8	4D	Groundwater best management practice monitoring.
Shirley Basin South, Wyoming	5	5-2	5A	Replaced missing perimeter sign.
		5-6	5B	Sprayed noxious weeds.
		5-7	5C	Groundwater compliance monitoring.
		5-8	5D	Continued to exceed a groundwater alternate concentration limit.
		5-8	5E	Installed six additional groundwater monitor wells.